
REMARKS

Claims 1-3 and 7-9 are currently amended. Claims 5-6 are canceled. Applicant respectfully submits that the amendments contained herein are fully supported by the specification and drawings as originally filed and do not contain new matter.

Examiner's Interview

Applicant's representatives respectfully thank Examiner Tai V. Nguyen for the courtesy of discussing the Office action in a telephonic Examiner's interview on March 28, 2007, initiated by Applicant's representatives. During the interview, the Examiner indicated that "Silverbrook" should replace "McKenna et al." in the first paragraph following the rejection statement of paragraph 3 on page 2 of the Office action. In addition, the Examiner indicated that claim 1 would be allowable if amended to include the limitations of claim 10.

Claim Rejections Under 35 U.S.C. § 102

Claims 1, 3-5, and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Silverbrook (U.S. Patent No. 6,247,792 B1). Applicant respectfully traverses.

Claim 1, as currently amended, recites: "encapsulating at least a portion of a channel core that corresponds to the internal channel in a molten material of an element of the fluid-ejection device; solidifying the molten material so that the at least the portion of the channel core is contained within the element; and using a solvent to dissolve the at least the portion of the channel core from the element after solidifying the molten material. Silverbrook does not include or suggest this.

Silverbrook forms a sacrificial material 55 on a nitride layer 16 (Figure 11) and then deposits a PECVD (Plasma Enhanced Chemical Vapor Deposition) glass 56 on sacrificial material 55. Silverbrook then removes the sacrificial material 55 by etching. However, there is no indication or suggestion of encapsulating sacrificial material 55 in a molten material. Therefore, Silverbrook does not include or suggest each and every element of claim 1, so claim 1 should be allowed.

Claims 3-4 and 7 depend from claim 1 and are thus allowable for at least the same reasons as claim 1. Claim 5 is canceled, mooted the rejection thereof.

Claim Rejections Under 35 U.S.C. § 103

Claims 6, 8, and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Silverbrook (U.S. Patent No. 6,247,792 B1) in view of Yamamoto (U.S. Patent No. 5,694,684). Applicant respectfully traverses.

Claim 6 is canceled, mooted the rejection thereof.

Claim 8, as currently amended, recites: “disposing a soluble channel core within a mold cavity; injecting a molten material of an element of the fluid-ejection device into the mold cavity so as to encapsulate at least a portion of the channel core; after the molten material of the element of the fluid-ejection device solidifies within the mold cavity, removing the element of the fluid-ejection device from the mold while the at least the portion of the channel core is encapsulated by the solidified material of the element of the fluid-ejection device; and dissolving the at least the portion of the channel core that is encapsulated by the solidified material of the element of the fluid-ejection device after removing the element of the fluid-ejection device with the at least the portion of the channel core encapsulated thereby from the mold.” Silverbrook does not include or suggest this. Therefore, claim 6 is patentably distinct from Silverbrook.

Moreover, the Examiner took a cavity 64 within a metal mold (Figure 4) of Yamamoto as corresponding to the mold cavity of claim 8 and a projection 72 of a block 71 (Figures 4 and 5) as corresponding to the channel core of claim 8. Yamamoto indicates that block 71, along with blocks 73, 74, 75, is set in the metal mold to provide cavity 64 (column 6, lines 39-41). Yamamoto further indicates (column 6, lines 41-45) that a resin material is injected into the cavity 64, using injection molder, and thereafter, the molded material is taken out, and it is subjected to a gate process, thus producing a top plate 11 (Figures 2 and 7). However, projection 72 remains in the metal mold, e.g., for forming other top plates 11, and is not encapsulated by the molded material when the molded material is removed from the metal mold, as required by claim 8. Therefore, Silverbrook in combination with Yamamoto fails to overcome the deficiencies of Silverbrook with respect to claim 8, so claim 8 is allowable over Silverbrook in view of Yamamoto.

Claim 9 depends from claim 8 and is thus allowable over Silverbrook in view of Yamamoto for at least the same reasons as claim 8.

Claims 2 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto (U.S. Patent No. 5,694,684).

Claim 1, as currently amended, recites: “encapsulating at least a portion of a channel core that corresponds to the internal channel in a molten material of an element of the fluid-ejection device; solidifying the molten material so that the at least the portion of the channel core is contained within the element; and using a solvent to dissolve the at least the portion of the channel core from the element after solidifying the molten material.

Yamamoto includes a metal mold (Figure 4). Blocks 72, 73, 74, and 75 are set in the metal mold to provide a cavity 64 within the metal mold(column 6, lines 39-41). A projections 72 of block 71 (Figures 4 and 5) extend into the cavity 64 for forming channels 28 in a top plate (Figure 1). Yamamoto further indicates (column 6, lines 41-45) that a resin material is injected into the cavity 64, using injection molder, and thereafter, the molded material is taken out, and it is subjected to a gate process, thus producing the top plate 11 (Figures 2 and 7). However, projections 72 remain in the metal mold, e.g., for forming other top plates 11, and are not dissolved from the molded material using a solvent. Therefore, Yamamoto does not include or suggest each and every recitation of claim 1, so claim 1 should be allowed over Yamamoto.

Claim 2 depends from claim 1 and is thus allowable over Yamamoto for at least the same reasons as claim 1.

As discussed above in conjunction with claim 8, Yamamoto does not include each and every recitation of claim 8, so claim 8 is allowable over Yamamoto. Claim 9 depends from claim 8 and is thus allowable for at least the same reasons as claim 8.

Allowable Subject Matter

Claim 10 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Applicant has not amended claim 10. Claim 10 depends from claim 8 and is thus allowable for at least the same reasons as claim 8.

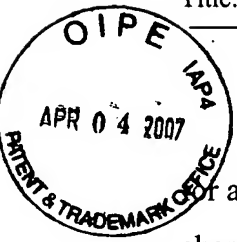
RESPONSE TO NON-FINAL OFFICE ACTION

Serial No. 10/657,624

Title: METHODS FOR CREATING CHANNELS

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CONCLUSION

In view of the above remarks, Applicant believes that all pending claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. Please charge any further fees deemed necessary or credit any overpayment to Deposit Account No.08-2025.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2208.

Respectfully submitted,

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